

Thursday, July 16, 2015

Terry Rice
Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682

RE: Storedahl-Evraz / 100

Enclosed are the results of analyses for work order A5F0817, which was received by the laboratory on 6/26/2015 at 1:17:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

DRAFT REPORT

The results provided in this report are PRELIMINARY and are subject to change based on subsequent analysis, QC validation or final data review. Please use these results with the understanding that they may have not been finalized by the laboratory

Columbia West Engineering, Inc. 11917 NE 95th Street Vancouver, WA 98682	Project: Storedahl-Evraz Project Number: 100 Project Manager: Terry Rice	Reported: 07/16/15 09:57
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Livingston G-121 ODOT 1 1/2"	A5F0817-01	Soil	06/26/15 06:45	06/26/15 13:17
Daybreak G-109 Beach Backfill	A5F0817-02	Soil	06/26/15 06:15	06/26/15 13:17
Livingston G-121 Berm Backfill	A5F0817-03	Soil	06/26/15 06:48	06/26/15 13:17

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Project: **Storedahl-Evrz**

Project Number: 100

Project Manager: Terry Rice

Reported:

07/16/15 09:57

ANALYTICAL CASE NARRATIVE

Work Order: A5F0817

Amended Report Revision 1:

Additional Analysis-

This report supersedes all previous reports.

The final report has been amended to reflect additional metals, by EPA 6020 method, to samples:

Livingston G-121 ODOT 1 1/2" (Apex ID: A5F0817-01)

Livingston G-121 Berm Backfill (Apex ID: A5F0817-03)

Darrell Auvil

Project Manager

7/16/2015

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01)			Matrix: Soil		Batch: 5060841			C-07
Aroclor 1016	ND	---	10.3	ug/kg dry	1	06/29/15 20:13	EPA 8082A	
Aroclor 1221	ND	---	10.3	"	"	"	"	
Aroclor 1232	ND	---	10.3	"	"	"	"	
Aroclor 1242	ND	---	10.3	"	"	"	"	
Aroclor 1248	ND	---	10.3	"	"	"	"	
Aroclor 1254	ND	---	10.3	"	"	"	"	
Aroclor 1260	ND	---	10.3	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 87 %</i>	<i>Limits: 72-126 %</i>	"	"	"	
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil		Batch: 5060841			C-07
Aroclor 1016	ND	---	10.2	ug/kg dry	1	06/29/15 20:50	EPA 8082A	
Aroclor 1221	ND	---	10.2	"	"	"	"	
Aroclor 1232	ND	---	10.2	"	"	"	"	
Aroclor 1242	ND	---	10.2	"	"	"	"	
Aroclor 1248	ND	---	10.2	"	"	"	"	
Aroclor 1254	ND	---	10.2	"	"	"	"	
Aroclor 1260	ND	---	10.2	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 81 %</i>	<i>Limits: 72-126 %</i>	"	"	"	
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060841			C-07
Aroclor 1016	ND	---	10.5	ug/kg dry	1	06/29/15 21:26	EPA 8082A	
Aroclor 1221	ND	---	10.5	"	"	"	"	
Aroclor 1232	ND	---	10.5	"	"	"	"	
Aroclor 1242	ND	---	10.5	"	"	"	"	
Aroclor 1248	ND	---	10.5	"	"	"	"	
Aroclor 1254	ND	---	10.5	"	"	"	"	
Aroclor 1260	ND	---	10.5	"	"	"	"	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>			<i>Recovery: 87 %</i>	<i>Limits: 72-126 %</i>	"	"	"	

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Project: Storedahl-Evrz

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ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01)			Matrix: Soil		Batch: 5060863			
Aldrin	ND	---	4.82	ug/kg dry	5	07/02/15 14:53	EPA 8081B	
alpha-BHC	ND	---	4.82	"	"	"	"	
beta-BHC	ND	---	4.82	"	"	"	"	
delta-BHC	ND	---	4.82	"	"	"	"	
gamma-BHC (Lindane)	ND	---	4.82	"	"	"	"	
cis-Chlordane	ND	---	4.82	"	"	"	"	
trans-Chlordane	ND	---	4.82	"	"	"	"	
4,4'-DDD	ND	---	4.82	"	"	"	"	
4,4'-DDE	ND	---	4.82	"	"	"	"	
4,4'-DDT	ND	---	4.82	"	"	"	"	
Dieldrin	ND	---	4.82	"	"	"	"	
Endosulfan I	ND	---	4.82	"	"	"	"	
Endosulfan II	ND	---	4.82	"	"	"	"	
Endosulfan sulfate	ND	---	4.82	"	"	"	"	
Endrin	ND	---	4.82	"	"	"	"	
Endrin Aldehyde	ND	---	4.82	"	"	"	"	
Endrin ketone	ND	---	4.82	"	"	"	"	
Heptachlor	ND	---	4.82	"	"	"	"	
Heptachlor epoxide	ND	---	4.82	"	"	"	"	
Methoxychlor	ND	---	14.5	"	"	"	"	Q-31
Chlordane (Technical)	ND	---	145	"	"	"	"	
Toxaphene (Total)	ND	---	145	"	"	"	"	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 71 %</i>	<i>Limits: 42-129 %</i>	"	"	"	
<i>Decachlorobiphenyl (Surr)</i>			<i>91 %</i>	<i>Limits: 65-151 %</i>	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil		Batch: 5060863			
Aldrin	ND	---	4.42	ug/kg dry	5	07/02/15 15:30	EPA 8081B	
alpha-BHC	ND	---	4.42	"	"	"	"	
beta-BHC	ND	---	4.42	"	"	"	"	
delta-BHC	ND	---	4.42	"	"	"	"	
gamma-BHC (Lindane)	ND	---	4.42	"	"	"	"	
cis-Chlordane	ND	---	4.42	"	"	"	"	
trans-Chlordane	ND	---	4.42	"	"	"	"	
4,4'-DDD	ND	---	4.42	"	"	"	"	
4,4'-DDE	ND	---	4.42	"	"	"	"	
4,4'-DDT	ND	---	4.42	"	"	"	"	
Dieldrin	ND	---	4.42	"	"	"	"	
Endosulfan I	ND	---	4.42	"	"	"	"	
Endosulfan II	ND	---	4.42	"	"	"	"	
Endosulfan sulfate	ND	---	4.42	"	"	"	"	
Endrin	ND	---	4.42	"	"	"	"	
Endrin Aldehyde	ND	---	4.42	"	"	"	"	
Endrin ketone	ND	---	4.42	"	"	"	"	
Heptachlor	ND	---	4.42	"	"	"	"	
Heptachlor epoxide	ND	---	4.42	"	"	"	"	
Methoxychlor	ND	---	13.3	"	"	"	"	Q-31
Chlordane (Technical)	ND	---	133	"	"	"	"	
Toxaphene (Total)	ND	---	133	"	"	"	"	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 76 %</i>	<i>Limits: 42-129 %</i>	"	"	"	
<i>Decachlorobiphenyl (Surr)</i>			<i>87 %</i>	<i>Limits: 65-151 %</i>	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060863			
Aldrin	ND	---	4.66	ug/kg dry	5	07/02/15 15:48	EPA 8081B	
alpha-BHC	ND	---	4.66	"	"	"	"	
beta-BHC	ND	---	4.66	"	"	"	"	
delta-BHC	ND	---	4.66	"	"	"	"	
gamma-BHC (Lindane)	ND	---	4.66	"	"	"	"	
cis-Chlordane	ND	---	4.66	"	"	"	"	
trans-Chlordane	ND	---	4.66	"	"	"	"	
4,4'-DDD	ND	---	4.66	"	"	"	"	
4,4'-DDE	ND	---	4.66	"	"	"	"	
4,4'-DDT	ND	---	4.66	"	"	"	"	
Dieldrin	ND	---	4.66	"	"	"	"	
Endosulfan I	ND	---	4.66	"	"	"	"	
Endosulfan II	ND	---	4.66	"	"	"	"	
Endosulfan sulfate	ND	---	4.66	"	"	"	"	
Endrin	ND	---	4.66	"	"	"	"	
Endrin Aldehyde	ND	---	4.66	"	"	"	"	
Endrin ketone	ND	---	4.66	"	"	"	"	
Heptachlor	ND	---	4.66	"	"	"	"	
Heptachlor epoxide	ND	---	4.66	"	"	"	"	
Methoxychlor	ND	---	14.0	"	"	"	"	Q-31
Chlordane (Technical)	ND	---	140	"	"	"	"	
Toxaphene (Total)	ND	---	140	"	"	"	"	
<i>Surrogate: 2,4,5,6-TCMX (Surr)</i>			<i>Recovery: 64 %</i>	<i>Limits: 42-129 %</i>	"	"	"	
<i>Decachlorobiphenyl (Surr)</i>			<i>82 %</i>	<i>Limits: 65-151 %</i>	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01RE2)			Matrix: Soil		Batch: 5060887			
Acenaphthene	ND	---	2.79	ug/kg dry	1	07/01/15 11:19	EPA 8270D	
Acenaphthylene	ND	---	2.79	"	"	"	"	
Anthracene	ND	---	2.79	"	"	"	"	
Benz(a)anthracene	ND	---	2.79	"	"	"	"	
Benzo(a)pyrene	ND	---	4.18	"	"	"	"	
Benzo(b)fluoranthene	ND	---	4.18	"	"	"	"	
Benzo(k)fluoranthene	ND	---	4.18	"	"	"	"	
Benzo(g,h,i)perylene	ND	---	2.79	"	"	"	"	
Chrysene	ND	---	2.79	"	"	"	"	
Dibenz(a,h)anthracene	ND	---	2.79	"	"	"	"	
Fluoranthene	ND	---	2.79	"	"	"	"	
Fluorene	ND	---	2.79	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	---	2.79	"	"	"	"	
1-Methylnaphthalene	ND	---	5.57	"	"	"	"	
2-Methylnaphthalene	ND	---	5.57	"	"	"	"	
Naphthalene	ND	---	5.57	"	"	"	"	
Phenanthrene	ND	---	2.79	"	"	"	"	
Pyrene	ND	---	2.79	"	"	"	"	
Carbazole	ND	---	4.18	"	"	"	"	
Dibenzofuran	ND	---	2.79	"	"	"	"	
4-Chloro-3-methylphenol	ND	---	27.9	"	"	"	"	
2-Chlorophenol	ND	---	13.9	"	"	"	"	
2,4-Dichlorophenol	ND	---	13.9	"	"	"	"	
2,4-Dimethylphenol	ND	---	13.9	"	"	"	"	
2,4-Dinitrophenol	ND	---	69.7	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	---	69.7	"	"	"	"	
2-Methylphenol	ND	---	6.97	"	"	"	"	
3+4-Methylphenol(s)	ND	---	6.97	"	"	"	"	
2-Nitrophenol	ND	---	27.9	"	"	"	"	
4-Nitrophenol	ND	---	27.9	"	"	"	"	
Pentachlorophenol (PCP)	ND	---	27.9	"	"	"	"	
Phenol	ND	---	5.57	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	---	13.9	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	---	14.6	"	"	"	"	
2,4,5-Trichlorophenol	ND	---	13.9	"	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01RE2)			Matrix: Soil		Batch: 5060887			
2,4,6-Trichlorophenol	ND	---	13.9	ug/kg dry	1	"	EPA 8270D	
Bis(2-ethylhexyl)phthalate	ND	---	41.8	"	"	"	"	
Butyl benzyl phthalate	ND	---	27.9	"	"	"	"	
Diethylphthalate	ND	---	27.9	"	"	"	"	
Dimethylphthalate	ND	---	27.9	"	"	"	"	
Di-n-butylphthalate	ND	---	27.9	"	"	"	"	
Di-n-octyl phthalate	ND	---	27.9	"	"	"	"	
N-Nitrosodimethylamine	ND	---	6.97	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	---	6.97	"	"	"	"	
N-Nitrosodiphenylamine	ND	---	6.97	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	---	6.97	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	---	6.97	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	---	6.97	"	"	"	"	
Hexachlorobenzene	ND	---	2.79	"	"	"	"	
Hexachlorobutadiene	ND	---	6.97	"	"	"	"	
Hexachlorocyclopentadiene	ND	---	13.9	"	"	"	"	
Hexachloroethane	ND	---	6.97	"	"	"	"	
2-Chloronaphthalene	ND	---	2.79	"	"	"	"	
1,2-Dichlorobenzene	ND	---	6.97	"	"	"	"	
1,3-Dichlorobenzene	ND	---	6.97	"	"	"	"	
1,4-Dichlorobenzene	ND	---	6.97	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	6.97	"	"	"	"	
4-Bromophenyl phenyl ether	ND	---	6.97	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	---	6.97	"	"	"	"	
Aniline	ND	---	13.9	"	"	"	"	
4-Chloroaniline	ND	---	6.97	"	"	"	"	
2-Nitroaniline	ND	---	55.7	"	"	"	"	
3-Nitroaniline	ND	---	55.7	"	"	"	"	
4-Nitroaniline	ND	---	55.7	"	"	"	"	
Nitrobenzene	ND	---	27.9	"	"	"	"	
2,4-Dinitrotoluene	ND	---	27.9	"	"	"	"	
2,6-Dinitrotoluene	ND	---	27.9	"	"	"	"	
Benzoic acid	ND	---	348	"	"	"	"	
Benzyl alcohol	ND	---	13.9	"	"	"	"	
Isophorone	ND	---	6.97	"	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01RE2)			Matrix: Soil	Batch: 5060887				
Azobenzene (1,2-DPH)	ND	---	6.97	ug/kg dry	1	"	EPA 8270D	
Bis(2-Ethylhexyl) adipate	ND	---	69.7	"	"	"	"	
3,3'-Dichlorobenzidine	ND	---	27.9	"	"	"	"	
1,2-Dinitrobenzene	ND	---	69.7	"	"	"	"	
1,3-Dinitrobenzene	ND	---	69.7	"	"	"	"	
1,4-Dinitrobenzene	ND	---	69.7	"	"	"	"	
Pyridine	ND	---	13.9	"	"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)			Recovery: 76 %	Limits: 37-122 %	"	"	"	
2-Fluorobiphenyl (Surr)			65 %	Limits: 44-115 %	"	"	"	
Phenol-d6 (Surr)			71 %	Limits: 33-122 %	"	"	"	
p-Terphenyl-d14 (Surr)			82 %	Limits: 54-127 %	"	"	"	
2-Fluorophenol (Surr)			80 %	Limits: 35-115 %	"	"	"	Q-41
2,4,6-Tribromophenol (Surr)			65 %	Limits: 39-132 %	"	"	"	
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil	Batch: 5060887				
Acenaphthene	ND	---	2.74	ug/kg dry	1	07/01/15 12:35	EPA 8270D	
Acenaphthylene	ND	---	2.74	"	"	"	"	
Anthracene	ND	---	2.74	"	"	"	"	
Benz(a)anthracene	ND	---	2.74	"	"	"	"	
Benzo(a)pyrene	ND	---	4.10	"	"	"	"	
Benzo(b)fluoranthene	ND	---	4.10	"	"	"	"	
Benzo(k)fluoranthene	ND	---	4.10	"	"	"	"	
Benzo(g,h,i)perylene	ND	---	2.74	"	"	"	"	
Chrysene	ND	---	2.74	"	"	"	"	
Dibenz(a,h)anthracene	ND	---	2.74	"	"	"	"	
Fluoranthene	ND	---	2.74	"	"	"	"	
Fluorene	ND	---	2.74	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	---	2.74	"	"	"	"	
1-Methylnaphthalene	ND	---	5.46	"	"	"	"	
2-Methylnaphthalene	ND	---	5.46	"	"	"	"	
Naphthalene	ND	---	5.46	"	"	"	"	
Phenanthrene	ND	---	2.74	"	"	"	"	
Pyrene	ND	---	2.74	"	"	"	"	
Carbazole	ND	---	4.10	"	"	"	"	
Dibenzofuran	ND	---	2.74	"	"	"	"	
4-Chloro-3-methylphenol	ND	---	27.4	"	"	"	"	

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Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil		Batch: 5060887			
2-Chlorophenol	ND	---	13.6	ug/kg dry	1	"	EPA 8270D	
2,4-Dichlorophenol	ND	---	13.6	"	"	"	"	
2,4-Dimethylphenol	ND	---	13.6	"	"	"	"	
2,4-Dinitrophenol	ND	---	68.3	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	---	68.3	"	"	"	"	
2-Methylphenol	ND	---	6.83	"	"	"	"	
3+4-Methylphenol(s)	ND	---	6.83	"	"	"	"	
2-Nitrophenol	ND	---	27.4	"	"	"	"	
4-Nitrophenol	ND	---	27.4	"	"	"	"	
Pentachlorophenol (PCP)	ND	---	27.4	"	"	"	"	
Phenol	ND	---	5.46	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	---	13.6	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	---	14.3	"	"	"	"	
2,4,5-Trichlorophenol	ND	---	13.6	"	"	"	"	
2,4,6-Trichlorophenol	ND	---	13.6	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	---	41.0	"	"	"	"	
Butyl benzyl phthalate	ND	---	27.4	"	"	"	"	
Diethylphthalate	ND	---	27.4	"	"	"	"	
Dimethylphthalate	ND	---	27.4	"	"	"	"	
Di-n-butylphthalate	ND	---	27.4	"	"	"	"	
Di-n-octyl phthalate	ND	---	27.4	"	"	"	"	
N-Nitrosodimethylamine	ND	---	6.83	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	---	6.83	"	"	"	"	
N-Nitrosodiphenylamine	ND	---	6.83	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	---	6.83	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	---	6.83	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	---	6.83	"	"	"	"	
Hexachlorobenzene	ND	---	2.74	"	"	"	"	
Hexachlorobutadiene	ND	---	6.83	"	"	"	"	
Hexachlorocyclopentadiene	ND	---	13.6	"	"	"	"	
Hexachloroethane	ND	---	6.83	"	"	"	"	
2-Chloronaphthalene	ND	---	2.74	"	"	"	"	
1,2-Dichlorobenzene	ND	---	6.83	"	"	"	"	
1,3-Dichlorobenzene	ND	---	6.83	"	"	"	"	
1,4-Dichlorobenzene	ND	---	6.83	"	"	"	"	

DRAFT REPORT

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Columbia West Engineering, Inc.

11917 NE 95th Street
Vancouver, WA 98682

Project: Storedahl-Evraz

Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil		Batch: 5060887			
1,2,4-Trichlorobenzene	ND	---	6.83	ug/kg dry	1	"	EPA 8270D	
4-Bromophenyl phenyl ether	ND	---	6.83	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	---	6.83	"	"	"	"	
Aniline	ND	---	13.6	"	"	"	"	
4-Chloroaniline	ND	---	6.83	"	"	"	"	
2-Nitroaniline	ND	---	54.6	"	"	"	"	
3-Nitroaniline	ND	---	54.6	"	"	"	"	
4-Nitroaniline	ND	---	54.6	"	"	"	"	
Nitrobenzene	ND	---	27.4	"	"	"	"	
2,4-Dinitrotoluene	ND	---	27.4	"	"	"	"	
2,6-Dinitrotoluene	ND	---	27.4	"	"	"	"	
Benzoic acid	ND	---	341	"	"	"	"	
Benzyl alcohol	ND	---	13.6	"	"	"	"	
Isophorone	ND	---	6.83	"	"	"	"	
Azobenzene (1,2-DPH)	ND	---	6.83	"	"	"	"	
Bis(2-Ethylhexyl) adipate	ND	---	68.3	"	"	"	"	
3,3'-Dichlorobenzidine	ND	---	27.4	"	"	"	"	
1,2-Dinitrobenzene	ND	---	68.3	"	"	"	"	
1,3-Dinitrobenzene	ND	---	68.3	"	"	"	"	
1,4-Dinitrobenzene	ND	---	68.3	"	"	"	"	
Pyridine	ND	---	13.6	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 78 %</i>	<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>65 %</i>	<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>			<i>64 %</i>	<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>84 %</i>	<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>			<i>74 %</i>	<i>Limits: 35-115 %</i>	"	"	"	
<i>2,4,6-Tribromophenol (Surr)</i>			<i>68 %</i>	<i>Limits: 39-132 %</i>	"	"	"	Q-41

DRAFT REPORT

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Columbia West Engineering, Inc.

Project: Storedahl-Evraz

11917 NE 95th Street

Project Number: 100

Vancouver, WA 98682

Project Manager: Terry Rice

Reported:

07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060887			
Acenaphthene	ND	---	2.82	ug/kg dry	1	07/01/15 13:13	EPA 8270D	
Acenaphthylene	ND	---	2.82	"	"	"	"	
Anthracene	ND	---	2.82	"	"	"	"	
Benz(a)anthracene	ND	---	2.82	"	"	"	"	
Benzo(a)pyrene	ND	---	4.23	"	"	"	"	
Benzo(b)fluoranthene	ND	---	4.23	"	"	"	"	
Benzo(k)fluoranthene	ND	---	4.23	"	"	"	"	
Benzo(g,h,i)perylene	ND	---	2.82	"	"	"	"	
Chrysene	ND	---	2.82	"	"	"	"	
Dibenz(a,h)anthracene	ND	---	2.82	"	"	"	"	
Fluoranthene	ND	---	2.82	"	"	"	"	
Fluorene	ND	---	2.82	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	---	2.82	"	"	"	"	
1-Methylnaphthalene	ND	---	5.64	"	"	"	"	
2-Methylnaphthalene	ND	---	5.64	"	"	"	"	
Naphthalene	ND	---	5.64	"	"	"	"	
Phenanthrene	ND	---	2.82	"	"	"	"	
Pyrene	ND	---	2.82	"	"	"	"	
Carbazole	ND	---	4.23	"	"	"	"	
Dibenzofuran	ND	---	2.82	"	"	"	"	
4-Chloro-3-methylphenol	ND	---	28.2	"	"	"	"	
2-Chlorophenol	ND	---	14.1	"	"	"	"	
2,4-Dichlorophenol	ND	---	14.1	"	"	"	"	
2,4-Dimethylphenol	ND	---	14.1	"	"	"	"	
2,4-Dinitrophenol	ND	---	70.5	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	---	70.5	"	"	"	"	
2-Methylphenol	ND	---	7.05	"	"	"	"	
3+4-Methylphenol(s)	ND	---	7.05	"	"	"	"	
2-Nitrophenol	ND	---	28.2	"	"	"	"	
4-Nitrophenol	ND	---	28.2	"	"	"	"	
Pentachlorophenol (PCP)	ND	---	28.2	"	"	"	"	
Phenol	ND	---	5.64	"	"	"	"	
2,3,4,6-Tetrachlorophenol	ND	---	14.1	"	"	"	"	
2,3,5,6-Tetrachlorophenol	ND	---	14.8	"	"	"	"	
2,4,5-Trichlorophenol	ND	---	14.1	"	"	"	"	

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Columbia West Engineering, Inc.

Project: Storedahl-Evraz

11917 NE 95th Street

Project Number: 100

Vancouver, WA 98682

Project Manager: Terry Rice

Reported:

07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060887			
2,4,6-Trichlorophenol	ND	---	14.1	ug/kg dry	1	"	EPA 8270D	
Bis(2-ethylhexyl)phthalate	ND	---	42.3	"	"	"	"	
Butyl benzyl phthalate	ND	---	28.2	"	"	"	"	
Diethylphthalate	ND	---	28.2	"	"	"	"	
Dimethylphthalate	ND	---	28.2	"	"	"	"	
Di-n-butylphthalate	ND	---	28.2	"	"	"	"	
Di-n-octyl phthalate	ND	---	28.2	"	"	"	"	
N-Nitrosodimethylamine	ND	---	7.05	"	"	"	"	
N-Nitroso-di-n-propylamine	ND	---	7.05	"	"	"	"	
N-Nitrosodiphenylamine	ND	---	7.05	"	"	"	"	
Bis(2-Chloroethoxy) methane	ND	---	7.05	"	"	"	"	
Bis(2-Chloroethyl) ether	ND	---	7.05	"	"	"	"	
Bis(2-Chloroisopropyl) ether	ND	---	7.05	"	"	"	"	
Hexachlorobenzene	ND	---	2.82	"	"	"	"	
Hexachlorobutadiene	ND	---	7.05	"	"	"	"	
Hexachlorocyclopentadiene	ND	---	14.1	"	"	"	"	
Hexachloroethane	ND	---	7.05	"	"	"	"	
2-Chloronaphthalene	ND	---	2.82	"	"	"	"	
1,2-Dichlorobenzene	ND	---	7.05	"	"	"	"	
1,3-Dichlorobenzene	ND	---	7.05	"	"	"	"	
1,4-Dichlorobenzene	ND	---	7.05	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	7.05	"	"	"	"	
4-Bromophenyl phenyl ether	ND	---	7.05	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	---	7.05	"	"	"	"	
Aniline	ND	---	14.1	"	"	"	"	
4-Chloroaniline	ND	---	7.05	"	"	"	"	
2-Nitroaniline	ND	---	56.4	"	"	"	"	
3-Nitroaniline	ND	---	56.4	"	"	"	"	
4-Nitroaniline	ND	---	56.4	"	"	"	"	
Nitrobenzene	ND	---	28.2	"	"	"	"	
2,4-Dinitrotoluene	ND	---	28.2	"	"	"	"	
2,6-Dinitrotoluene	ND	---	28.2	"	"	"	"	
Benzoic acid	ND	---	352	"	"	"	"	
Benzyl alcohol	ND	---	14.1	"	"	"	"	
Isophorone	ND	---	7.05	"	"	"	"	

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060887			
Azobenzene (1,2-DPH)	ND	---	7.05	ug/kg dry	1	"	EPA 8270D	
Bis(2-Ethylhexyl) adipate	ND	---	70.5	"	"	"	"	
3,3'-Dichlorobenzidine	ND	---	28.2	"	"	"	"	Q-42
1,2-Dinitrobenzene	ND	---	70.5	"	"	"	"	
1,3-Dinitrobenzene	ND	---	70.5	"	"	"	"	
1,4-Dinitrobenzene	ND	---	70.5	"	"	"	"	
Pyridine	ND	---	14.1	"	"	"	"	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 62 %</i>	<i>Limits: 37-122 %</i>	"	"	"	
<i>2-Fluorobiphenyl (Surr)</i>			<i>51 %</i>	<i>Limits: 44-115 %</i>	"	"	"	
<i>Phenol-d6 (Surr)</i>			<i>53 %</i>	<i>Limits: 33-122 %</i>	"	"	"	
<i>p-Terphenyl-d14 (Surr)</i>			<i>70 %</i>	<i>Limits: 54-127 %</i>	"	"	"	
<i>2-Fluorophenol (Surr)</i>			<i>71 %</i>	<i>Limits: 35-115 %</i>	"	"	"	Q-41
<i>2,4,6-Tribromophenol (Surr)</i>			<i>59 %</i>	<i>Limits: 39-132 %</i>	"	"	"	

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01)			Matrix: Soil					
Batch: 5060840								
Arsenic	1.02	---	1.02	mg/kg dry	10	07/02/15 03:22	EPA 6020A	
Barium	41.8	---	1.02	"	"	"	"	
Chromium	ND	---	4.06	"	"	"	"	
Copper	98.2	---	1.02	"	"	"	"	
Lead	2.42	---	0.203	"	"	"	"	
Manganese	204	---	1.02	"	"	"	"	
Mercury	ND	---	0.0813	"	"	"	"	
Selenium	ND	---	2.03	"	"	"	"	
Silver	ND	---	0.203	"	"	"	"	
Zinc	30.0	---	4.06	"	"	"	"	
Livingston G-121 ODOT 1 1/2" (A5F0817-01RE1)			Matrix: Soil					
Batch: 5060840								
Cadmium	0.234	---	0.203	mg/kg dry	10	07/06/15 13:12	EPA 6020A	
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil					
Batch: 5060840								
Arsenic	59.0	---	1.02	mg/kg dry	10	07/02/15 03:26	EPA 6020A	
Barium	74.4	---	1.02	"	"	"	"	
Chromium	9.69	---	4.09	"	"	"	"	
Lead	3.47	---	0.205	"	"	"	"	
Mercury	ND	---	0.0818	"	"	"	"	
Selenium	ND	---	2.05	"	"	"	"	
Silver	ND	---	0.205	"	"	"	"	
Daybreak G-109 Beach Backfill (A5F0817-02RE1)			Matrix: Soil					
Batch: 5060840								
Cadmium	ND	---	0.205	mg/kg dry	10	07/06/15 13:24	EPA 6020A	
Daybreak G-109 Beach Backfill (A5F0817-02RE2)			Matrix: Soil					
Batch: 5070183								
Arsenic	4.45	---	0.995	mg/kg dry	10	07/09/15 14:26	EPA 6020A	
Barium	68.2	---	0.995	"	"	"	"	
Cadmium	ND	---	0.995	"	"	"	"	
Chromium	9.51	---	0.995	"	"	"	"	
Lead	3.28	---	0.995	"	"	"	"	
Mercury	ND	---	0.0796	"	"	"	"	
Selenium	ND	---	1.99	"	"	"	"	

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evrax
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Daybreak G-109 Beach Backfill (A5F0817-02RE2)			Matrix: Soil					
Silver	ND	---	0.995	mg/kg dry	10	"	EPA 6020A	
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil					
Batch: 5060840								
Arsenic	1.65	---	1.10	mg/kg dry	10	07/02/15 03:31	EPA 6020A	Q-42
Barium	59.4	---	1.10	"	"	"	"	
Chromium	ND	---	4.42	"	"	"	"	
Copper	24.5	---	1.10	"	"	"	"	
Lead	2.50	---	0.221	"	"	"	"	
Manganese	210	---	1.10	"	"	"	"	
Mercury	ND	---	0.0884	"	"	"	"	
Selenium	ND	---	2.21	"	"	"	"	
Silver	ND	---	0.221	"	"	"	"	
Zinc	33.3	---	4.42	"	"	"	"	
Livingston G-121 Berm Backfill (A5F0817-03RE1)			Matrix: Soil					
Batch: 5060840								
Cadmium	ND	---	0.221	mg/kg dry	10	07/06/15 13:27	EPA 6020A	

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight								
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
Livingston G-121 ODOT 1 1/2" (A5F0817-01)			Matrix: Soil		Batch: 5060845			
% Solids	95.4	---	1.00	% by Weight	1	06/30/15 09:34	EPA 8000C	
Daybreak G-109 Beach Backfill (A5F0817-02)			Matrix: Soil		Batch: 5060845			
% Solids	97.4	---	1.00	% by Weight	1	06/30/15 09:34	EPA 8000C	
Livingston G-121 Berm Backfill (A5F0817-03)			Matrix: Soil		Batch: 5060845			
% Solids	94.5	---	1.00	% by Weight	1	06/30/15 09:34	EPA 8000C	

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060841 - EPA 3546						Soil						
Blank (5060841-BLK1)						Prepared: 06/29/15 10:42 Analyzed: 06/29/15 17:48						C-07
EPA 8082A												
Aroclor 1016	ND	---	9.09	ug/kg wet	1	---	---	---	---	---	---	
Aroclor 1221	ND	---	9.09	"	"	---	---	---	---	---	---	
Aroclor 1232	ND	---	9.09	"	"	---	---	---	---	---	---	
Aroclor 1242	ND	---	9.09	"	"	---	---	---	---	---	---	
Aroclor 1248	ND	---	9.09	"	"	---	---	---	---	---	---	
Aroclor 1254	ND	---	9.09	"	"	---	---	---	---	---	---	
Aroclor 1260	ND	---	9.09	"	"	---	---	---	---	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 104 %		Limits: 72-126 %		Dilution: 1x						
LCS (5060841-BS1)						Prepared: 06/29/15 10:42 Analyzed: 06/29/15 18:06						C-07
EPA 8082A												
Aroclor 1016	186	---	10.0	ug/kg wet	1	250	---	75	47-134%	---	---	
Aroclor 1260	244	---	10.0	"	"	"	---	98	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 109 %		Limits: 72-126 %		Dilution: 1x						
Matrix Spike (5060841-MS1)						Prepared: 06/29/15 10:42 Analyzed: 06/29/15 22:03						C-07
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
EPA 8082A												
Aroclor 1016	172	---	10.6	ug/kg dry	1	264	ND	65	47-134%	---	---	
Aroclor 1260	215	---	10.6	"	"	"	ND	81	53-140%	---	---	
Surr: Decachlorobiphenyl (Surr)		Recovery: 90 %		Limits: 72-126 %		Dilution: 1x						

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Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060863 - EPA 3546						Soil						
Blank (5060863-BLK1)						Prepared: 06/30/15 06:55 Analyzed: 07/02/15 14:16						
EPA 8081B												
Aldrin	ND	---	0.833	ug/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	0.833	"	"	---	---	---	---	---	---	
beta-BHC	ND	---	0.833	"	"	---	---	---	---	---	---	
delta-BHC	ND	---	0.833	"	"	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	0.833	"	"	---	---	---	---	---	---	
cis-Chlordane	ND	---	0.833	"	"	---	---	---	---	---	---	
trans-Chlordane	ND	---	0.833	"	"	---	---	---	---	---	---	
4,4'-DDD	ND	---	0.833	"	"	---	---	---	---	---	---	
4,4'-DDE	ND	---	0.833	"	"	---	---	---	---	---	---	
4,4'-DDT	ND	---	0.833	"	"	---	---	---	---	---	---	
Dieldrin	ND	---	0.833	"	"	---	---	---	---	---	---	
Endosulfan I	ND	---	0.833	"	"	---	---	---	---	---	---	
Endosulfan II	ND	---	0.833	"	"	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	0.833	"	"	---	---	---	---	---	---	
Endrin	ND	---	0.833	"	"	---	---	---	---	---	---	
Endrin Aldehyde	ND	---	0.833	"	"	---	---	---	---	---	---	
Endrin ketone	ND	---	0.833	"	"	---	---	---	---	---	---	
Heptachlor	ND	---	0.833	"	"	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	0.833	"	"	---	---	---	---	---	---	
Methoxychlor	ND	---	2.50	"	"	---	---	---	---	---	---	Q-31
Chlordane (Technical)	ND	---	25.0	"	"	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	25.0	"	"	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 99 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		105 %		65-151 %		"						

LCS (5060863-BS1)

Prepared: 06/30/15 06:55 Analyzed: 07/02/15 14:35

EPA 8081B												
Aldrin	44.7	---	1.00	ug/kg wet	1	50.0	---	89	45-136%	---	---	
alpha-BHC	55.9	---	1.00	"	"	"	---	112	45-137%	---	---	
beta-BHC	53.0	---	1.00	"	"	"	---	106	50-136%	---	---	
delta-BHC	49.0	---	1.00	"	"	"	---	98	47-139%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060863 - EPA 3546						Soil						
LCS (5060863-BS1)						Prepared: 06/30/15 06:55 Analyzed: 07/02/15 14:35						
gamma-BHC (Lindane)	54.6	---	1.00	"	"	"	---	109	49-135%	---	---	
cis-Chlordane	52.3	---	1.00	"	"	"	---	105	54-133%	---	---	
trans-Chlordane	52.8	---	1.00	"	"	"	---	106	53-135%	---	---	
4,4'-DDD	52.8	---	1.00	"	"	"	---	106	56-139%	---	---	
4,4'-DDE	54.4	---	1.00	"	"	"	---	109	56-134%	---	---	
4,4'-DDT	53.8	---	1.00	"	"	"	---	108	50-141%	---	---	Q-31
Dieldrin	55.8	---	1.00	"	"	"	---	112	56-136%	---	---	
Endosulfan I	53.2	---	1.00	"	"	"	---	106	52-132%	---	---	
Endosulfan II	58.2	---	1.00	"	"	"	---	116	53-134%	---	---	
Endosulfan sulfate	57.9	---	1.00	"	"	"	---	116	55-136%	---	---	
Endrin	57.8	---	1.00	"	"	"	---	116	56-140%	---	---	
Endrin Aldehyde	52.6	---	1.00	"	"	"	---	105	35-137%	---	---	
Endrin ketone	55.3	---	1.00	"	"	"	---	111	55-136%	---	---	Q-41
Heptachlor	52.6	---	1.00	"	"	"	---	105	47-136%	---	---	
Heptachlor epoxide	52.8	---	1.00	"	"	"	---	106	52-136%	---	---	
Methoxychlor	55.4	---	3.00	"	"	"	---	111	52-143%	---	---	Q-31
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 94 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		101 %		65-151 %		"						

Duplicate (5060863-DUP1)

Prepared: 06/30/15 06:55 Analyzed: 07/02/15 15:11

QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)

EPA 8081B

Aldrin	ND	---	4.93	ug/kg dry	5	---	ND	---	---	---	30%
alpha-BHC	ND	---	4.93	"	"	---	ND	---	---	---	30%
beta-BHC	ND	---	4.93	"	"	---	ND	---	---	---	30%
delta-BHC	ND	---	4.93	"	"	---	ND	---	---	---	30%
gamma-BHC (Lindane)	ND	---	4.93	"	"	---	ND	---	---	---	30%
cis-Chlordane	ND	---	4.93	"	"	---	ND	---	---	---	30%
trans-Chlordane	ND	---	4.93	"	"	---	ND	---	---	---	30%
4,4'-DDD	ND	---	4.93	"	"	---	ND	---	---	---	30%
4,4'-DDE	ND	---	4.93	"	"	---	ND	---	---	---	30%
4,4'-DDT	ND	---	4.93	"	"	---	ND	---	---	---	30%

DRAFT REPORT

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Columbia West Engineering, Inc.	Project: Storedahl-Evraz	
11917 NE 95th Street	Project Number: 100	Reported:
Vancouver, WA 98682	Project Manager: Terry Rice	07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Organochlorine Pesticides by EPA 8081B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060863 - EPA 3546						Soil						
Duplicate (5060863-DUP1)						Prepared: 06/30/15 06:55 Analyzed: 07/02/15 15:11						
QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)												
Dieldrin	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endosulfan I	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endosulfan II	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endosulfan sulfate	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endrin	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endrin Aldehyde	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Endrin ketone	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Heptachlor	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Heptachlor epoxide	ND	---	4.93	"	"	---	ND	---	---	---	30%	
Methoxychlor	ND	---	14.8	"	"	---	ND	---	---	---	30%	Q-31
Chlordane (Technical)	ND	---	148	"	"	---	ND	---	---	---	30%	
Toxaphene (Total)	ND	---	148	"	"	---	ND	---	---	---	30%	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 70 %		Limits: 42-129 %		Dilution: 5x						
Decachlorobiphenyl (Surr)		91 %		65-151 %		"						

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Blank (5060887-BLK2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 09:50						
EPA 8270D												
Acenaphthene	ND	---	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	2.50	"	"	---	---	---	---	---	---	
Anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	3.75	"	"	---	---	---	---	---	---	
Benzo(b+k)fluoranthene(s)	ND	---	7.50	"	"	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	2.50	"	"	---	---	---	---	---	---	
Chrysene	ND	---	2.50	"	"	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	2.50	"	"	---	---	---	---	---	---	
Fluoranthene	ND	---	2.50	"	"	---	---	---	---	---	---	
Fluorene	ND	---	2.50	"	"	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	2.50	"	"	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
Phenanthrene	ND	---	2.50	"	"	---	---	---	---	---	---	
Pyrene	ND	---	2.50	"	"	---	---	---	---	---	---	
Carbazole	ND	---	3.75	"	"	---	---	---	---	---	---	
Dibenzofuran	ND	---	2.50	"	"	---	---	---	---	---	---	
4-Chloro-3-methylphenol	ND	---	25.0	"	"	---	---	---	---	---	---	
2-Chlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dimethylphenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4-Dinitrophenol	ND	---	62.5	"	"	---	---	---	---	---	---	
4,6-Dinitro-2-methylphenol	ND	---	62.5	"	"	---	---	---	---	---	---	
2-Methylphenol	ND	---	6.25	"	"	---	---	---	---	---	---	
3+4-Methylphenol(s)	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Nitrophenol	ND	---	25.0	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Blank (5060887-BLK2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 09:50						
4-Nitrophenol	ND	---	25.0	ug/kg wet	"	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	25.0	"	"	---	---	---	---	---	---	
Phenol	ND	---	5.00	"	"	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,3,5,6-Tetrachlorophenol	ND	---	13.1	"	"	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	12.5	"	"	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	---	37.5	"	"	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Diethylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Dimethylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Di-n-butylphthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	---	25.0	"	"	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Chloroisopropyl) ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Hexachlorobenzene	ND	---	2.50	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	6.25	"	"	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	---	12.5	"	"	---	---	---	---	---	---	
Hexachloroethane	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Chloronaphthalene	ND	---	2.50	"	"	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	6.25	"	"	---	---	---	---	---	---	

DRAFT REPORT

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Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Blank (5060887-BLK2)				Prepared: 06/30/15 12:06 Analyzed: 07/01/15 09:50								
4-Bromophenyl phenyl ether	ND	---	6.25	ug/kg wet	"	---	---	---	---	---	---	
4-Chlorophenyl phenyl ether	ND	---	6.25	"	"	---	---	---	---	---	---	
Aniline	ND	---	12.5	"	"	---	---	---	---	---	---	
4-Chloroaniline	ND	---	6.25	"	"	---	---	---	---	---	---	
2-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
3-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
4-Nitroaniline	ND	---	50.0	"	"	---	---	---	---	---	---	
Nitrobenzene	ND	---	25.0	"	"	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	---	25.0	"	"	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	---	25.0	"	"	---	---	---	---	---	---	
Benzoic acid	ND	---	312	"	"	---	---	---	---	---	---	
Benzyl alcohol	ND	---	12.5	"	"	---	---	---	---	---	---	
Isophorone	ND	---	6.25	"	"	---	---	---	---	---	---	
Azobenzene (1,2-DPH)	ND	---	6.25	"	"	---	---	---	---	---	---	
Bis(2-Ethylhexyl) adipate	ND	---	62.5	"	"	---	---	---	---	---	---	
3,3'-Dichlorobenzidine	ND	---	25.0	"	"	---	---	---	---	---	---	
1,2-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
1,3-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
1,4-Dinitrobenzene	ND	---	62.5	"	"	---	---	---	---	---	---	
Pyridine	ND	---	12.5	"	"	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 72 %		Limits: 37-122 %		Dilution: 1x						
2-Fluorobiphenyl (Surr)		68 %		44-115 %		"						
Phenol-d6 (Surr)		66 %		33-122 %		"						
p-Terphenyl-d14 (Surr)		90 %		54-127 %		"						
2-Fluorophenol (Surr)		72 %		35-115 %		"						
2,4,6-Tribromophenol (Surr)		93 %		39-132 %		"						
LCS (5060887-BS2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 10:29						
EPA 8270D												
Acenaphthene	412	---	2.67	ug/kg wet	1	533	---	77	40-122%	---	---	
Acenaphthylene	400	---	2.67	"	"	"	---	75	32-132%	---	---	

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
LCS (5060887-BS2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 10:29						
Anthracene	428	---	2.67	ug/kg wet	"	"	---	80	47-123%	---	---	
Benz(a)anthracene	480	---	2.67	"	"	"	---	90	49-126%	---	---	
Benzo(a)pyrene	491	---	4.00	"	"	"	---	92	45-129%	---	---	
Benzo(b)fluoranthene	494	---	4.00	"	"	"	---	93	45-132%	---	---	
Benzo(k)fluoranthene	466	---	4.00	"	"	"	---	87	47-132%	---	---	
Benzo(b+k)fluoranthene(s)	976	---	8.00	"	"	1070	---	92	45-132%	---	---	
Benzo(g,h,i)perylene	472	---	2.67	"	"	533	---	89	43-134%	---	---	
Chrysene	467	---	2.67	"	"	"	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	466	---	2.67	"	"	"	---	87	45-134%	---	---	
Fluoranthene	445	---	2.67	"	"	"	---	83	50-127%	---	---	
Fluorene	405	---	2.67	"	"	"	---	76	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	456	---	2.67	"	"	"	---	85	45-133%	---	---	
1-Methylnaphthalene	402	---	5.33	"	"	"	---	75	40-120%	---	---	
2-Methylnaphthalene	421	---	5.33	"	"	"	---	79	38-122%	---	---	
Naphthalene	380	---	5.33	"	"	"	---	71	35-123%	---	---	
Phenanthrene	398	---	2.67	"	"	"	---	75	50-121%	---	---	
Pyrene	422	---	2.67	"	"	"	---	79	47-127%	---	---	
Carbazole	448	---	4.00	"	"	"	---	84	50-122%	---	---	
Dibenzofuran	395	---	2.67	"	"	"	---	74	44-120%	---	---	
4-Chloro-3-methylphenol	520	---	26.7	"	"	"	---	98	45-122%	---	---	
2-Chlorophenol	449	---	13.3	"	"	"	---	84	34-121%	---	---	
2,4-Dichlorophenol	470	---	13.3	"	"	"	---	88	40-122%	---	---	
2,4-Dimethylphenol	506	---	13.3	"	"	"	---	95	30-127%	---	---	
2,4-Dinitrophenol	543	---	66.7	"	"	"	---	102	5-137%	---	---	
4,6-Dinitro-2-methylphenol	495	---	66.7	"	"	"	---	93	29-132%	---	---	
2-Methylphenol	495	---	6.67	"	"	"	---	93	32-122%	---	---	
3+4-Methylphenol(s)	507	---	6.67	"	"	"	---	95	34-120%	---	---	
2-Nitrophenol	456	---	26.7	"	"	"	---	86	36-123%	---	---	
4-Nitrophenol	513	---	26.7	"	"	"	---	96	30-132%	---	---	
Pentachlorophenol (PCP)	511	---	26.7	"	"	"	---	96	25-133%	---	---	
Phenol	520	---	5.33	"	"	"	---	98	34-120%	---	---	Q-41

DRAFT REPORT

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11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
LCS (5060887-BS2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 10:29						
2,3,4,6-Tetrachlorophenol	477	---	13.3	ug/kg wet	"	"	---	89	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	472	---	14.0	"	"	"	---	89	40-120%	---	---	
2,4,5-Trichlorophenol	487	---	13.3	"	"	"	---	91	41-124%	---	---	
2,4,6-Trichlorophenol	475	---	13.3	"	"	"	---	89	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	522	---	40.0	"	"	"	---	98	51-133%	---	---	
Butyl benzyl phthalate	526	---	26.7	"	"	"	---	99	48-132%	---	---	
Diethylphthalate	461	---	26.7	"	"	"	---	86	50-124%	---	---	
Dimethylphthalate	464	---	26.7	"	"	"	---	87	48-124%	---	---	
Di-n-butylphthalate	479	---	26.7	"	"	"	---	90	51-128%	---	---	
Di-n-octyl phthalate	486	---	26.7	"	"	"	---	91	44-140%	---	---	
N-Nitrosodimethylamine	521	---	6.67	"	"	"	---	98	23-120%	---	---	Q-41
N-Nitroso-di-n-propylamine	529	---	6.67	"	"	"	---	99	36-120%	---	---	Q-41
N-Nitrosodiphenylamine	454	---	6.67	"	"	"	---	85	38-127%	---	---	
Bis(2-Chloroethoxy) methane	456	---	6.67	"	"	"	---	85	36-121%	---	---	
Bis(2-Chloroethyl) ether	414	---	6.67	"	"	"	---	78	31-120%	---	---	
Bis(2-Chloroisopropyl) ether	522	---	6.67	"	"	"	---	98	33-131%	---	---	Q-41
Hexachlorobenzene	474	---	2.67	"	"	"	---	89	44-122%	---	---	
Hexachlorobutadiene	430	---	6.67	"	"	"	---	81	32-123%	---	---	
Hexachlorocyclopentadiene	582	---	13.3	"	"	"	---	109	5-140%	---	---	Q-41
Hexachloroethane	436	---	6.67	"	"	"	---	82	28-120%	---	---	
2-Chloronaphthalene	402	---	2.67	"	"	"	---	75	41-120%	---	---	
1,2-Dichlorobenzene	385	---	6.67	"	"	"	---	72	33-120%	---	---	
1,3-Dichlorobenzene	395	---	6.67	"	"	"	---	74	30-120%	---	---	
1,4-Dichlorobenzene	395	---	6.67	"	"	"	---	74	31-120%	---	---	
1,2,4-Trichlorobenzene	378	---	6.67	"	"	"	---	71	34-120%	---	---	
4-Bromophenyl phenyl ether	491	---	6.67	"	"	"	---	92	46-124%	---	---	
4-Chlorophenyl phenyl ether	434	---	6.67	"	"	"	---	81	45-121%	---	---	
Aniline	412	---	13.3	"	"	"	---	77	7-120%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
LCS (5060887-BS2)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 10:29						
4-Chloroaniline	382	---	6.67	ug/kg wet	"	"	---	72	16-120%	---	---	
2-Nitroaniline	458	---	53.3	"	"	"	---	86	44-127%	---	---	
3-Nitroaniline	426	---	53.3	"	"	"	---	80	33-120%	---	---	
4-Nitroaniline	480	---	53.3	"	"	"	---	90	35-120%	---	---	
Nitrobenzene	494	---	26.7	"	"	"	---	93	34-122%	---	---	Q-41
2,4-Dinitrotoluene	484	---	26.7	"	"	"	---	91	48-126%	---	---	
2,6-Dinitrotoluene	482	---	26.7	"	"	"	---	90	46-124%	---	---	
Benzoic acid	ND	---	333	"	"	1070	---	16	5-140%	---	---	
Benzyl alcohol	519	---	13.3	"	"	533	---	97	29-122%	---	---	
Isophorone	519	---	6.67	"	"	"	---	97	30-122%	---	---	Q-41
Azobenzene (1,2-DPH)	527	---	6.67	"	"	"	---	99	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	510	---	66.7	"	"	"	---	96	60-121%	---	---	
3,3'-Dichlorobenzidine	961	---	26.7	"	"	1070	---	90	22-121%	---	---	
1,2-Dinitrobenzene	468	---	66.7	"	"	533	---	88	44-120%	---	---	
1,3-Dinitrobenzene	481	---	66.7	"	"	"	---	90	42-127%	---	---	
1,4-Dinitrobenzene	492	---	66.7	"	"	"	---	92	37-132%	---	---	
Pyridine	417	---	13.3	"	"	"	---	78	5-120%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr) Recovery: 90 % Limits: 37-122 % Dilution: 1x</i>												
<i>2-Fluorobiphenyl (Surr) 75 % 44-115 % "</i>												
<i>Phenol-d6 (Surr) 92 % 33-122 % "</i>												
<i>p-Terphenyl-d14 (Surr) 108 % 54-127 % "</i>												
<i>2-Fluorophenol (Surr) 93 % 35-115 % "</i>												
<i>2,4,6-Tribromophenol (Surr) 107 % 39-132 % " Q-41</i>												

Duplicate (5060887-DUP1)

Prepared: 06/30/15 12:06 Analyzed: 07/01/15 11:57

QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)

EPA 8270D

Acenaphthene	ND	---	2.79	ug/kg dry	1	---	ND	---	---	---	30%
Acenaphthylene	ND	---	2.79	"	"	---	ND	---	---	---	30%
Anthracene	ND	---	2.79	"	"	---	ND	---	---	---	30%
Benz(a)anthracene	ND	---	2.79	"	"	---	ND	---	---	---	30%
Benzo(a)pyrene	ND	---	4.17	"	"	---	ND	---	---	---	30%

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Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
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QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546							Soil					
Duplicate (5060887-DUP1)				Prepared: 06/30/15 12:06 Analyzed: 07/01/15 11:57								
QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)												
Benzo(b)fluoranthene	ND	---	4.17	ug/kg dry	"	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	---	4.17	"	"	---	ND	---	---	---	30%	
Benzo(b+k)fluoranthene(s)	ND	---	8.35	"	"	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Chrysene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Fluoranthene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Fluorene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
1-Methylnaphthalene	ND	---	5.56	"	"	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	---	5.56	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.56	"	"	---	ND	---	---	---	30%	
Phenanthrene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Pyrene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Carbazole	ND	---	4.17	"	"	---	ND	---	---	---	30%	
Dibenzofuran	ND	---	2.79	"	"	---	ND	---	---	---	30%	
4-Chloro-3-methylphenol	ND	---	27.9	"	"	---	ND	---	---	---	30%	
2-Chlorophenol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
2,4-Dichlorophenol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
2,4-Dimethylphenol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
2,4-Dinitrophenol	ND	---	69.6	"	"	---	ND	---	---	---	30%	
4,6-Dinitro-2-methylphenol	ND	---	69.6	"	"	---	ND	---	---	---	30%	
2-Methylphenol	ND	---	6.96	"	"	---	ND	---	---	---	30%	
3+4-Methylphenol(s)	ND	---	6.96	"	"	---	ND	---	---	---	30%	
2-Nitrophenol	ND	---	27.9	"	"	---	ND	---	---	---	30%	
4-Nitrophenol	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Phenol	ND	---	5.56	"	"	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	---	14.6	"	"	---	ND	---	---	---	30%	

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Project Number: 100
Project Manager: Terry RiceReported:
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QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Duplicate (5060887-DUP1)				Prepared: 06/30/15 12:06 Analyzed: 07/01/15 11:57								
QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)												
2,4,5-Trichlorophenol	ND	---	13.9	ug/kg dry	"	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
Bis(2-ethylhexyl)phthalate	ND	---	41.7	"	"	---	ND	---	---	---	30%	
Butyl benzyl phthalate	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Diethylphthalate	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Dimethylphthalate	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Di-n-butylphthalate	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Di-n-octyl phthalate	ND	---	27.9	"	"	---	ND	---	---	---	30%	
N-Nitrosodimethylamine	ND	---	6.96	"	"	---	ND	---	---	---	30%	
N-Nitroso-di-n-propylamine	ND	---	6.96	"	"	---	ND	---	---	---	30%	
N-Nitrosodiphenylamine	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroethoxy) methane	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroethyl) ether	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Bis(2-Chloroisopropyl) ether	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Hexachlorobenzene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Hexachlorocyclopentadiene	ND	---	13.9	"	"	---	ND	---	---	---	30%	
Hexachloroethane	ND	---	6.96	"	"	---	ND	---	---	---	30%	
2-Chloronaphthalene	ND	---	2.79	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	6.96	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	6.96	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	6.96	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	6.96	"	"	---	ND	---	---	---	30%	
4-Bromophenyl phenyl ether	ND	---	6.96	"	"	---	ND	---	---	---	30%	
4-Chlorophenyl phenyl ether	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Aniline	ND	---	13.9	"	"	---	ND	---	---	---	30%	
4-Chloroaniline	ND	---	6.96	"	"	---	ND	---	---	---	30%	

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Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Duplicate (5060887-DUP1)						Prepared: 06/30/15 12:06 Analyzed: 07/01/15 11:57						
QC Source Sample: Livingston G-121 ODOT 1 1/2" (A5F0817-01)												
2-Nitroaniline	ND	---	55.6	ug/kg dry	"	---	ND	---	---	---	30%	
3-Nitroaniline	ND	---	55.6	"	"	---	ND	---	---	---	30%	
4-Nitroaniline	ND	---	55.6	"	"	---	ND	---	---	---	30%	
Nitrobenzene	ND	---	27.9	"	"	---	ND	---	---	---	30%	
2,4-Dinitrotoluene	ND	---	27.9	"	"	---	ND	---	---	---	30%	
2,6-Dinitrotoluene	ND	---	27.9	"	"	---	ND	---	---	---	30%	
Benzoic acid	ND	---	347	"	"	---	ND	---	---	---	30%	
Benzyl alcohol	ND	---	13.9	"	"	---	ND	---	---	---	30%	
Isophorone	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Azobenzene (1,2-DPH)	ND	---	6.96	"	"	---	ND	---	---	---	30%	
Bis(2-Ethylhexyl) adipate	ND	---	69.6	"	"	---	ND	---	---	---	30%	
3,3'-Dichlorobenzidine	ND	---	27.9	"	"	---	ND	---	---	---	30%	
1,2-Dinitrobenzene	ND	---	69.6	"	"	---	ND	---	---	---	30%	
1,3-Dinitrobenzene	ND	---	69.6	"	"	---	ND	---	---	---	30%	
1,4-Dinitrobenzene	ND	---	69.6	"	"	---	ND	---	---	---	30%	
Pyridine	ND	---	13.9	"	"	---	ND	---	---	---	30%	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 73 %		Limits: 37-122 %		Dilution: 1x						
2-Fluorobiphenyl (Surr)		60 %		44-115 %		"						
Phenol-d6 (Surr)		64 %		33-122 %		"						
p-Terphenyl-d14 (Surr)		77 %		54-127 %		"						
2-Fluorophenol (Surr)		79 %		35-115 %		"						
2,4,6-Tribromophenol (Surr)		65 %		39-132 %		"						
Q-41												

Q-41

Matrix Spike (5060887-MS1)

Prepared: 06/30/15 12:06 Analyzed: 07/01/15 13:51

QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)

EPA 8270D

Acenaphthene	446	---	8.46	ug/kg dry	3	564	ND	79	40-122%	---	---
Acenaphthylene	458	---	8.46	"	"	"	ND	81	32-132%	---	---
Anthracene	472	---	8.46	"	"	"	ND	84	47-123%	---	---
Benz(a)anthracene	452	---	8.46	"	"	"	ND	80	49-126%	---	---
Benzo(a)pyrene	500	---	12.7	"	"	"	ND	89	45-129%	---	---

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QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546							Soil					
Matrix Spike (5060887-MS1)				Prepared: 06/30/15 12:06 Analyzed: 07/01/15 13:51								
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
Benzo(b)fluoranthene	486	---	12.7	ug/kg dry	"	"	ND	86	45-132%	---	---	
Benzo(k)fluoranthene	471	---	12.7	"	"	"	ND	84	47-132%	---	---	
Benzo(b+k)fluoranthene(s)	955	---	25.4	"	"	1130	ND	85	45-132%	---	---	
Benzo(g,h,i)perylene	453	---	8.46	"	"	564	ND	80	43-134%	---	---	
Chrysene	427	---	8.46	"	"	"	ND	76	50-124%	---	---	
Dibenz(a,h)anthracene	449	---	8.46	"	"	"	ND	80	45-134%	---	---	
Fluoranthene	473	---	8.46	"	"	"	ND	84	50-127%	---	---	
Fluorene	463	---	8.46	"	"	"	ND	82	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	435	---	8.46	"	"	"	ND	77	45-133%	---	---	
1-Methylnaphthalene	427	---	16.9	"	"	"	ND	76	40-120%	---	---	
2-Methylnaphthalene	442	---	16.9	"	"	"	ND	78	38-122%	---	---	
Naphthalene	431	---	16.9	"	"	"	ND	77	35-123%	---	---	
Phenanthrene	449	---	8.46	"	"	"	ND	80	50-121%	---	---	
Pyrene	477	---	8.46	"	"	"	ND	85	47-127%	---	---	
Carbazole	488	---	12.7	"	"	"	ND	87	50-122%	---	---	
Dibenzofuran	443	---	8.46	"	"	"	ND	79	44-120%	---	---	
4-Chloro-3-methylphenol	541	---	84.6	"	"	"	ND	96	45-122%	---	---	Q-41
2-Chlorophenol	471	---	42.2	"	"	"	ND	84	34-121%	---	---	
2,4-Dichlorophenol	452	---	42.2	"	"	"	ND	80	40-122%	---	---	
2,4-Dimethylphenol	407	---	42.2	"	"	"	ND	72	30-127%	---	---	
2,4-Dinitrophenol	412	---	211	"	"	"	ND	73	5-137%	---	---	Q-41
4,6-Dinitro-2-methylphenol	485	---	211	"	"	"	ND	86	29-132%	---	---	Q-41
2-Methylphenol	466	---	21.1	"	"	"	ND	83	32-122%	---	---	
3+4-Methylphenol(s)	476	---	21.1	"	"	"	ND	84	34-120%	---	---	
2-Nitrophenol	449	---	84.6	"	"	"	ND	80	36-123%	---	---	
4-Nitrophenol	454	---	84.6	"	"	"	ND	80	30-132%	---	---	
Pentachlorophenol (PCP)	386	---	84.6	"	"	"	ND	68	25-133%	---	---	
Phenol	497	---	16.9	"	"	"	ND	88	34-120%	---	---	
2,3,4,6-Tetrachlorophenol	452	---	42.2	"	"	"	ND	80	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	446	---	44.4	"	"	"	ND	79	40-120%	---	---	

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DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Matrix Spike (5060887-MS1)				Prepared: 06/30/15 12:06 Analyzed: 07/01/15 13:51								
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
2,4,5-Trichlorophenol	513	---	42.2	ug/kg dry	"	"	ND	91	41-124%	---	---	
2,4,6-Trichlorophenol	488	---	42.2	"	"	"	ND	86	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	516	---	127	"	"	"	ND	92	51-133%	---	---	
Butyl benzyl phthalate	527	---	84.6	"	"	"	ND	94	48-132%	---	---	
Diethylphthalate	491	---	84.6	"	"	"	ND	87	50-124%	---	---	
Dimethylphthalate	478	---	84.6	"	"	"	ND	85	48-124%	---	---	
Di-n-butylphthalate	514	---	84.6	"	"	"	ND	91	51-128%	---	---	
Di-n-octyl phthalate	610	---	84.6	"	"	"	ND	108	44-140%	---	---	Q-41
N-Nitrosodimethylamine	451	---	21.1	"	"	"	ND	80	23-120%	---	---	
N-Nitroso-di-n-propylamine	555	---	21.1	"	"	"	ND	99	36-120%	---	---	Q-41
N-Nitrosodiphenylamine	485	---	21.1	"	"	"	ND	86	38-127%	---	---	
Bis(2-Chloroethoxy) methane	464	---	21.1	"	"	"	ND	82	36-121%	---	---	
Bis(2-Chloroethyl) ether	464	---	21.1	"	"	"	ND	82	31-120%	---	---	
Bis(2-Chloroisopropyl) ether	608	---	21.1	"	"	"	ND	108	33-131%	---	---	Q-41
Hexachlorobenzene	385	---	8.46	"	"	"	ND	68	44-122%	---	---	
Hexachlorobutadiene	398	---	21.1	"	"	"	ND	71	32-123%	---	---	
Hexachlorocyclopentadiene	460	---	42.2	"	"	"	ND	82	5-140%	---	---	
Hexachloroethane	464	---	21.1	"	"	"	ND	82	28-120%	---	---	
2-Chloronaphthalene	415	---	8.46	"	"	"	ND	74	41-120%	---	---	
1,2-Dichlorobenzene	423	---	21.1	"	"	"	ND	75	33-120%	---	---	
1,3-Dichlorobenzene	411	---	21.1	"	"	"	ND	73	30-120%	---	---	
1,4-Dichlorobenzene	416	---	21.1	"	"	"	ND	74	31-120%	---	---	
1,2,4-Trichlorobenzene	390	---	21.1	"	"	"	ND	69	34-120%	---	---	
4-Bromophenyl phenyl ether	424	---	21.1	"	"	"	ND	75	46-124%	---	---	
4-Chlorophenyl phenyl ether	429	---	21.1	"	"	"	ND	76	45-121%	---	---	
Aniline	375	---	42.2	"	"	"	ND	66	7-120%	---	---	
4-Chloroaniline	341	---	21.1	"	"	"	ND	61	16-120%	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060887 - EPA 3546						Soil						
Matrix Spike (5060887-MS1)						Prepared: 06/30/15 12:06		Analyzed: 07/01/15 13:51				
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
2-Nitroaniline	505	---	169	ug/kg dry	"	"	ND	90	44-127%	---	---	
3-Nitroaniline	395	---	169	"	"	"	ND	70	33-120%	---	---	
4-Nitroaniline	391	---	169	"	"	"	ND	69	35-120%	---	---	
Nitrobenzene	490	---	84.6	"	"	"	ND	87	34-122%	---	---	
2,4-Dinitrotoluene	477	---	84.6	"	"	"	ND	85	48-126%	---	---	
2,6-Dinitrotoluene	480	---	84.6	"	"	"	ND	85	46-124%	---	---	
Benzoic acid	ND	---	1060	"	"	1130	ND	42	5-140%	---	---	Q-41
Benzyl alcohol	527	---	42.2	"	"	564	ND	94	29-122%	---	---	
Isophorone	527	---	21.1	"	"	"	ND	93	30-122%	---	---	Q-41
Azobenzene (1,2-DPH)	542	---	21.1	"	"	"	ND	96	39-125%	---	---	Q-41
Bis(2-Ethylhexyl) adipate	532	---	211	"	"	"	ND	94	60-121%	---	---	
3,3'-Dichlorobenzidine	1410	---	84.6	"	"	1130	ND	125	22-121%	---	---	Q-01
1,2-Dinitrobenzene	440	---	211	"	"	564	ND	78	44-120%	---	---	
1,3-Dinitrobenzene	460	---	211	"	"	"	ND	82	42-127%	---	---	
1,4-Dinitrobenzene	483	---	211	"	"	"	ND	86	37-132%	---	---	
Pyridine	311	---	42.2	"	"	"	ND	55	5-120%	---	---	
Surr: Nitrobenzene-d5 (Surr)		Recovery: 81 %		Limits: 37-122 %		Dilution: 3x						
2-Fluorobiphenyl (Surr)		70 %		44-115 %		"						
Phenol-d6 (Surr)		77 %		33-122 %		"						
p-Terphenyl-d14 (Surr)		77 %		54-127 %		"						
2-Fluorophenol (Surr)		87 %		35-115 %		"						
2,4,6-Tribromophenol (Surr)		82 %		39-132 %		"						
Q-41												

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060840 - EPA 3051A						Soil						
Blank (5060840-BLK1)						Prepared: 06/29/15 09:58 Analyzed: 07/02/15 01:23						
EPA 6020A												
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	"	"	---	---	---	---	---	---	
Cadmium	ND	---	0.200	"	"	---	---	---	---	---	---	
Chromium	ND	---	4.00	"	"	---	---	---	---	---	---	
Copper	ND	---	1.00	"	"	---	---	---	---	---	---	
Lead	ND	---	0.200	"	"	---	---	---	---	---	---	
Manganese	ND	---	1.00	"	"	---	---	---	---	---	---	
Mercury	ND	---	0.0800	"	"	---	---	---	---	---	---	
Selenium	ND	---	2.00	"	"	---	---	---	---	---	---	
Silver	ND	---	0.200	"	"	---	---	---	---	---	---	
Zinc	ND	---	4.00	"	"	---	---	---	---	---	---	
LCS (5060840-BS1)						Prepared: 06/29/15 09:58 Analyzed: 07/02/15 01:27						
EPA 6020A												
Arsenic	48.0	---	1.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	
Barium	50.5	---	1.00	"	"	"	---	101	"	---	---	
Cadmium	49.0	---	0.200	"	"	"	---	98	"	---	---	
Chromium	49.7	---	4.00	"	"	"	---	99	"	---	---	
Copper	52.3	---	1.00	"	"	"	---	105	"	---	---	
Lead	51.8	---	0.200	"	"	"	---	104	"	---	---	
Manganese	50.4	---	1.00	"	"	"	---	101	"	---	---	
Mercury	1.08	---	0.0800	"	"	1.00	---	108	"	---	---	
Selenium	24.5	---	2.00	"	"	25.0	---	98	"	---	---	
Silver	24.9	---	0.200	"	"	"	---	100	"	---	---	
Zinc	49.3	---	4.00	"	"	50.0	---	99	"	---	---	
Matrix Spike (5060840-MS2)						Prepared: 06/29/15 09:58 Analyzed: 07/02/15 03:36						
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
EPA 6020A												
Arsenic	52.9	---	1.04	mg/kg dry	10	51.9	1.65	99	75-125%	---	---	
Barium	91.9	---	1.04	"	"	"	59.4	63	"	---	---	Q-03

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evrax
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060840 - EPA 3051A							Soil					
Matrix Spike (5060840-MS2)					Prepared: 06/29/15 09:58		Analyzed: 07/02/15 03:36					
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
Cadmium	51.1	---	0.207	mg/kg dry	"	"	0.188	98	"	---	---	
Chromium	54.7	---	4.15	"	"	"	2.45	101	"	---	---	
Copper	95.6	---	1.04	"	"	"	24.5	137	"	---	---	Q-04
Lead	53.9	---	0.207	"	"	"	2.50	99	"	---	---	
Manganese	210	---	1.04	"	"	"	210	0.6	"	---	---	Q-03
Mercury	1.07	---	0.0830	"	"	1.04	ND	103	"	---	---	
Selenium	26.4	---	2.07	"	"	25.9	ND	102	"	---	---	
Silver	26.4	---	0.207	"	"	"	ND	102	"	---	---	
Zinc	77.3	---	4.15	"	"	51.9	33.3	85	"	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: Storedahl-Evraz
Project Number: 100
Project Manager: Terry RiceReported:
07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Total Metals by EPA 6020 (ICPMS)

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5070183 - EPA 3051A						Soil						
Blank (5070183-BLK1)						Prepared: 07/08/15 11:45 Analyzed: 07/09/15 14:11						
EPA 6020A												
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	"	"	---	---	---	---	---	---	
Cadmium	ND	---	1.00	"	"	---	---	---	---	---	---	
Chromium	ND	---	1.00	"	"	---	---	---	---	---	---	
Lead	ND	---	1.00	"	"	---	---	---	---	---	---	
Mercury	ND	---	0.0800	"	"	---	---	---	---	---	---	
Selenium	ND	---	2.00	"	"	---	---	---	---	---	---	
Silver	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (5070183-BS1)						Prepared: 07/08/15 11:45 Analyzed: 07/09/15 14:14						
EPA 6020A												
Arsenic	52.8	---	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Barium	52.9	---	1.00	"	"	"	---	106	"	---	---	
Cadmium	49.4	---	1.00	"	"	"	---	99	"	---	---	
Chromium	51.3	---	1.00	"	"	"	---	103	"	---	---	
Lead	49.3	---	1.00	"	"	"	---	99	"	---	---	
Mercury	1.04	---	0.0800	"	"	1.00	---	104	"	---	---	
Selenium	26.4	---	2.00	"	"	25.0	---	105	"	---	---	
Silver	24.8	---	1.00	"	"	"	---	99	"	---	---	

DRAFT REPORT

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Columbia West Engineering, Inc.	Project: Storedahl-Evraz	
11917 NE 95th Street	Project Number: 100	Reported:
Vancouver, WA 98682	Project Manager: Terry Rice	07/16/15 09:57

QUALITY CONTROL (QC) SAMPLE RESULTS

DRAFT: Percent Dry Weight

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5060845 - Total Solids (Dry Weight)							Soil					
Duplicate (5060845-DUP2)					Prepared: 06/29/15 11:38		Analyzed: 06/30/15 09:34					
QC Source Sample: Livingston G-121 Berm Backfill (A5F0817-03)												
EPA 8000C												
% Solids	95.5	---	1.00	% by Weight	1	---	94.5	---	---	1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Columbia West Engineering, Inc.
11917 NE 95th Street
Vancouver, WA 98682Project: **Storedahl-Evraz**
Project Number: 100
Project Manager: Terry Rice**Reported:**
07/16/15 09:57

SAMPLE PREPARATION INFORMATION

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5060841							
A5F0817-01	Soil	EPA 8082A	06/26/15 06:45	06/29/15 10:42	10.13g/5mL	10g/5mL	0.99
A5F0817-02	Soil	EPA 8082A	06/26/15 06:15	06/29/15 10:42	10.04g/5mL	10g/5mL	1.00
A5F0817-03	Soil	EPA 8082A	06/26/15 06:48	06/29/15 10:42	10.06g/5mL	10g/5mL	0.99

Organochlorine Pesticides by EPA 8081B

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5060863							
A5F0817-01	Soil	EPA 8081B	06/26/15 06:45	06/30/15 06:55	10.88g/5mL	10g/5mL	0.92
A5F0817-02	Soil	EPA 8081B	06/26/15 06:15	06/30/15 06:55	11.62g/5mL	10g/5mL	0.86
A5F0817-03	Soil	EPA 8081B	06/26/15 06:48	06/30/15 06:55	11.35g/5mL	10g/5mL	0.88

Semivolatile Organic Compounds by EPA 8270D

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5060887							
A5F0817-01RE2	Soil	EPA 8270D	06/26/15 06:45	06/30/15 12:26	15.04g/2mL	15g/2mL	1.00
A5F0817-02	Soil	EPA 8270D	06/26/15 06:15	06/30/15 12:26	15.03g/2mL	15g/2mL	1.00
A5F0817-03	Soil	EPA 8270D	06/26/15 06:48	06/30/15 12:26	15.01g/2mL	15g/2mL	1.00

Total Metals by EPA 6020 (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5060840							
A5F0817-01	Soil	EPA 6020A	06/26/15 06:45	06/29/15 09:58	0.516g/50mL	0.5g/50mL	0.97
A5F0817-01RE1	Soil	EPA 6020A	06/26/15 06:45	06/29/15 09:58	0.516g/50mL	0.5g/50mL	0.97
A5F0817-02	Soil	EPA 6020A	06/26/15 06:15	06/29/15 09:58	0.502g/50mL	0.5g/50mL	1.00
A5F0817-02RE1	Soil	EPA 6020A	06/26/15 06:15	06/29/15 09:58	0.502g/50mL	0.5g/50mL	1.00
A5F0817-03	Soil	EPA 6020A	06/26/15 06:48	06/29/15 09:58	0.479g/50mL	0.5g/50mL	1.04
A5F0817-03RE1	Soil	EPA 6020A	06/26/15 06:48	06/29/15 09:58	0.479g/50mL	0.5g/50mL	1.04
Batch: 5070183							
A5F0817-02RE2	Soil	EPA 6020A	06/26/15 06:15	07/08/15 11:45	0.516g/50mL	0.5g/50mL	0.97

DRAFT REPORT

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Columbia West Engineering, Inc.	Project: Storedahl-Evrz	
11917 NE 95th Street	Project Number: 100	Reported:
Vancouver, WA 98682	Project Manager: Terry Rice	07/16/15 09:57

SAMPLE PREPARATION INFORMATION

Percent Dry Weight							
Prep: Total Solids (Dry Weight)							
Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 5060845							
A5F0817-01	Soil	EPA 8000C	06/26/15 06:45	06/29/15 11:38	1N/A/1N/A	1N/A/1N/A	NA
A5F0817-02	Soil	EPA 8000C	06/26/15 06:15	06/29/15 11:38	1N/A/1N/A	1N/A/1N/A	NA
A5F0817-03	Soil	EPA 8000C	06/26/15 06:48	06/29/15 11:38	1N/A/1N/A	1N/A/1N/A	NA

Columbia West Engineering, Inc.

11917 NE 95th Street
Vancouver, WA 98682

Project: **Storedahl-Evrz**

Project Number: 100
Project Manager: Terry Rice

Reported:
07/16/15 09:57

Notes and Definitions

Qualifiers:

- C-07 Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-03 Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04 Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-31 Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
- Q-41 Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-42 Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)

Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.

For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.

Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
- QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

DRAFT REPORT

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Reported:
07/16/15 09:57

*** Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Reported:
07/16/15 09:57

[illegible]

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